

IN THE CLAIMS

71. (Currently Amended) An optical apparatus comprising:
an optical system comprising an optical surface which has no axis of rotational symmetry is rotationally asymmetrical with regard to an optical axis and an optical element which has a variable optical characteristic;
an image pickup device constructed and arranged to pick up an image formed by said optical system;
a display function for displaying an image which is picked up;
a microprocessor configured to process an output signal from said image pickup device; and
a memory configured to store said output signal.

72. (Currently Amended) An optical apparatus comprising:
an optical system comprising an optical surface which has no axis of rotational symmetry is rotationally asymmetrical with regard to an optical axis and an optical element which has a variable optical characteristic;
an image pickup device constructed and arranged to pick up an image formed by said optical system;
a display function for displaying an image which is picked up;
a microprocessor configured to process an output signal from said image pickup device;
a memory configured to store said output signal; and
a view finder function for determining an image pickup range.

73. (Currently Amended) An optical apparatus comprising:
an optical system comprising an optical surface which has no axis of rotational symmetry is rotationally asymmetrical with regard to an optical axis and a reflective type optical element which has a variable optical characteristic;
an image pickup device constructed and arranged to pick up an image formed by said optical system;
a display function for displaying an image which is picked up;

a microprocessor configured to process an output signal from said image pickup device;

a memory configured to store said output signal; and

a ~~view~~ finder function for determining an image pickup range.

74. (Currently Amended) An optical apparatus comprising:

an optical system comprising a reflective type optical element which has an optical surface having no axis of rotational symmetry asymmetrical with regard to an optical axis and has a variable optical characteristic;

an image pickup device constructed and arranged to pick up an image formed by said optical system;

a display function for displaying an image which is picked up;

a microprocessor configured to process an output signal from said image pickup device;

a memory configured to store said output signal; and

a ~~view~~ finder function for determining an image pickup range.

75. (Currently Amended) An optical apparatus comprising:

an optical system comprising an optical surface which has no axis of rotational symmetry is rotationally asymmetrical with regard to an optical axis and an oblique incidence type reflective optical element which has a variable optical characteristic;

an image pickup device constructed and arranged to pick up an image formed by said optical system;

a display device constructed and arranged to display an image which is picked up;

a microprocessor configured to process an output signal from said image pickup device;

a memory configured to store said output signal; and

a ~~view~~ finder function for determining an image pickup range.

76. (Currently Amended) An optical apparatus comprising:

an optical system comprising an optical surface which has no axis of rotational symmetry is rotationally asymmetrical with regard to an optical axis and a folded optical axis;

an image pickup device constructed and arranged to pick up an image formed by said optical system;

a display function for displaying an image which is picked up;
 a microprocessor configured to process an output signal from said image pickup device;
 a memory configured to store said output signal; and
 a ~~view~~ finder function for determining an image pickup range.

77. (Currently Amended) An optical apparatus to be manufactured by lithography comprising:

 an optical system comprising an optical surface which has no axis of rotational symmetry ~~is rotationally asymmetrical with regard to an optical axis~~ and an optical element which has a variable optical characteristic;

 an image pickup device constructed and arranged to pick up an image formed by said optical system;

 a display function for displaying an image which is picked up;

 a microprocessor configured to process an output signal from said image pickup device;

 a memory configured to store said output signal; and

 a ~~view~~ finder function for determining an image pickup range.

78. (Currently Amended) The optical ~~device~~ apparatus according to any one of claims 72 through 77, further comprising:

 an infrared cut filter.

79. (Currently Amended) The optical ~~device~~ apparatus according to any one of claims 72 through 77,

 wherein at least one of said image pickup device, said optical surface which has no axis of rotational symmetry ~~is asymmetrical with regard to the optical axis~~ and said optical element having the variable optical characteristic has an infrared cut filter function.

80. (Currently Amended) The optical ~~device~~ apparatus according to any one of claims 72 through 77, further comprising:

 an optical element or an optical member which is manufactured by molding a plastic material, a glass material or the like.

81. (Currently Amended) The optical ~~device~~ apparatus according to any one of claims 72 through 77,

wherinc at least one of said display device, ~~said view~~ a finder device with a finder function, said optical surface which has no axis of rotational symmetry ~~is rotationally asymmetrical with regard to the optical axis~~ and said optical element having the variable optical characteristic is manufactured by molding a plastic material, a glass material or the like.

82. (Currently Amended) The optical ~~device~~ apparatus according to any one of claims 72 through 77,

wherein said optical surface which has no axis of rotational symmetry ~~is asymmetrical with regard to the optical axis~~ is a free curved surface.

83. (Currently Amended) The optical ~~device~~ apparatus according to any one of claims 72 through 77, further comprising:

a diffractive optical element.

84. (Currently Amended) ~~A telephone device comprising an~~ An optical apparatus having a telephone function, said optical apparatus comprising:

an optical system comprising an optical surface which has no axis of rotational symmetry ~~is rotationally asymmetrical with regard to an optical axis~~ and an optical element which has a variable optical characteristic;

an image pickup device constructed and arranged to pick up an image formed by said optical system;

a display function for displaying an image which is picked up;

a microprocessor configured to process an output signal from said image pickup device; and

a memory configured to store said output signal.

85. (Currently Amended) ~~A telephone device comprising an~~ An optical apparatus having a telephone function, said optical apparatus comprising:

an optical system comprising an optical surface which has no axis of rotational symmetry ~~is rotationally asymmetrical with regard to an optical axis~~ and a reflective type optical element which has a variable optical characteristic;

an image pickup device constructed and arranged to pick up an image formed by said optical system;

a display function for displaying an image which is picked up;

a microprocessor configured to process an output signal from said image pickup device; and

a memory configured to store said output signal.

86. (Currently Amended) ~~A telephone device comprising an~~ An optical apparatus having a telephone function, said optical apparatus comprising:

an optical system comprising a reflective type optical element which has an optical surface having no axis of rotational symmetry asymmetrical with regard to an optical axis and has a variable optical characteristic;

an image pickup device constructed and arranged to pick up an image formed by said optical system;

a display function for displaying an image which is picked up;

a microprocessor configured to process an output signal from said image pickup device; and

a memory configured to store said output signal.

87. (Currently Amended) ~~A telephone device comprising an~~ An optical apparatus having a telephone function, said optical apparatus comprising:

an optical system comprising an optical surface which has no axis of rotational symmetry is rotationally asymmetrical with regard to an optical axis and an oblique incidence type reflective optical element which has a variable optical characteristic;

an image pickup device constructed and arranged to pick up an image formed by said optical system;

a display function for displaying an image which is picked up;

a microprocessor configured to process an output signal from said image pickup device; and

a memory configured to store said output signal.

88. (Currently Amended) ~~A telephone device comprising an~~ An optical apparatus having a telephone function, said optical apparatus comprising:

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an optical system comprising an optical surface which has no axis of rotational symmetry ~~is rotationally asymmetrical with regard to an optical axis~~ and a folded optical axis;

an image pickup device constructed and arranged to pick up an image formed by said optical system;

a display function for displaying an image which is picked up;

a microprocessor configured to process an output signal from said image pickup device; and

a memory configured to store said output signal.

89. (Currently Amended) ~~A telephone device comprising an~~ An optical apparatus having a telephone function, said optical apparatus comprising:

an optical system comprising an optical surface which has no axis of rotational symmetry ~~is rotationally asymmetrical with regard to an optical axis~~ and an optical element which has a variable optical characteristic;

an image pickup device constructed and arranged to pick up an image formed by said optical system;

a display function for displaying an image which is picked up;

a microprocessor configured to process an output signal from said image pickup device; and

a memory configured to store said output signal.

90. (Currently Amended) The optical ~~device~~ apparatus according to any one of claims 84 through 89, further comprising:

an infrared filter.

91. (Currently Amended) The optical ~~device~~ apparatus according to any one of claims 84 through 89,

wherein at least one of said image pickup device, said optical surface which has no axis of rotational symmetry ~~is rotationally asymmetrical with regard to the optical axis~~ and said optical element having the variable optical characteristic has an infrared cut filter function.

92. (Currently Amended) The optical ~~device~~ apparatus according to any one of claims 84 through 89, further comprising:

an optical element or an optical member which is manufactured by molding a plastic material, a glass material or the like.

93. (Currently Amended) The optical device apparatus according to any one of claims 84 through 89,

wherein at least one of said image pickup device, said optical surface which has no axis of rotational symmetry ~~is rotationally asymmetrical with regard to the optical axis~~ and said optical element having the variable optical characteristic is manufactured by molding a plastic material, a glass material or the like.

94. (Currently Amended) The optical device apparatus according to any one of claims 84 through 89,

wherein at least one of said image pickup device, said optical surface which has no axis of rotational symmetry ~~is rotationally asymmetrical with regard to the optical axis~~ is a free curved surface.

95. (Currently Amended) The optical device apparatus according to any one of claims 84 through 89, further comprising:

a diffractive optical element.

96. (Withdrawn) An optical device comprising:

a substrate,

wherein rays pass in the vicinity of a surface of said substrate and an electronic part is disposed on or in the vicinity of said substrate.

97. (Withdrawn) An optical device comprising:

a transparent substrate,

wherein rays pass through said transparent substrate or in the vicinity of a surface of said substrate and an electronic part is disposed on or in the vicinity of said transparent substrate.

98. (Withdrawn) The optical device according to claim 96 or 97, comprising:
an image pickup device.

99. (Withdrawn) The optical device according to claim 96 or 97, comprising:
a telephone device.
100. (Withdrawn) The optical device according to claim 96 or 97, comprising:
an optical element which has a variable optical characteristic.
101. (Withdrawn) The optical device according to claim 96 or 97, comprising:
an optical surface which is rotationally asymmetrical with regard to an optical axis.
102. (Withdrawn) The optical device according to claim 96 or 97, comprising:
a folded optical axis.